BY ROENED APPLICATION U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. Form PTO-1449 PATENT AND TRADEMARK OFFICE (REV. 8-83) 09/649,190 23438.00023 INFORMATION DISCLOSURE APPLICANT **CITATION** Paul V. Cooper FILING DATE GROUP sheets if necessary) 1742 August 28, 2000 TITLE: SCRAP MELTER AND IMPELLER THEREFORE U. S. PATENT DOCUMENTS **FILING** SUB-DATE IF **DOCUMENT EXAMINER APPROPRIATE CLASS CLASS REF NAME** INITIAL NUMBER DATE 09-17-74 3,836,280 Koch SK 4,068,965 01-17-78 Lichti 04-22-97 Thut 5,622,481 McEwen et al. 08-12-97 5,655,849 van Linden et al. 6,074,455 06-13-00 04-21-98 Eichenmiller et al. 5,741,422 09-15-1908 O'Donnell 898,499 SK FOREIGN PATENT DOCUMENTS TRANSLATION **DOCUMENT** SUB-REF **COUNTRY CLASS CLASS NUMBER** DATE YES NO Soviet Union 773,312 10-1980 SK 416,401 6-1974 Soviet Union 5-1998 63-104773 Japan 58-48796 3-1983 Japan 683,469 3-1964 Canada 90,756 1-1958 Norway 392,268 9-1965 Switzerland 942,648 11-1963 United Kingdom 2,217,784 11-1989 United Kingdom sk EXAMINER DATE CONSIDERED S. Kastler 1-02

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Form PTO-1449 (REV. 8-83) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. 23438.00023

APPLICATION 09/649,190

INFORMATION DISCLOSURE CITATION

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APPLICANT
Paul V. Cooper

FILING DATE August 28, 2000 GROUP 1742

TITLE: SCRAP MELTER AND IMPELLER THEREFORE

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CL	ASS.	•	UB- .ASS	FILING DATE IF APPROPRIATE
SK		506,572	10-10-93	Wagener)			"
		585,188	06-29-97	Davis					
		1,100,475	06-16-14	Franckaerts					
		1,454,967	05-15-23	Gill					
		1,518,501	12-09-24	Gill					
		1,522,765	01-13-25	Wilke					
		1,526,851	02-17-25	Hall					
		1,673,594	06-12-28	Schmidt					
		1,896,201	02-07-33	Sterner-Rainer	П	·			
		2,038,221	04-21-36	Kagi	П				
		2,290,961	07-28-42	Heuer					
	-	2,488,447	11-15-49	Tangen et al		·			***************************************
		2,515,478	07-18-50	Tooley et al					
		2,566,892	09-04-51	Jacobs					
		2,677,609	05-04-54	Moore et al					
		2,698,583	01-04-55	House et al					,
		2,787,873	04-09-57	Hadley					
		2,808,782	10-08-57	Thompson et al					
		2,821,472	01-28-58	Peterson et al					
SIC		2,832,292	04-29-58	Edwards					,
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Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. PATENT AND TRADEMARK OFFICE (REV. 8-83) 23438.00023 INFORMATION DISCLOSURE **APPLICANT** CITATION Paul V. Cooper ts if necessary) FILING DATE August 28, 2000 TITLE: SCRAP MELTER AND IMPELLER THEREFORE **U. S. PATENT DOCUMENTS FILING** DATE IF SUB-DOCUMENT **EXAMINER APPROPRIATE** REF **CLASS CLASS** INITIAL NUMBER DATE NAME 04-07-1998 5,735,668 Klien SK 209,219 10-22-1878 Bookwalter 251,104 12-20-1881 Finch Cole 364,804 06-14-1887 1,717,969 06-18-1929 Goodner 1,331,997 02-24-1920 Neal 5,318,360 06-07-1994 Langer et al. 05-19-1970 Kilbane 3,512,788 4,867,638 09-19-1989 Handtmann et al. 11-21-1978 Miller et al. 4,126,360 Thut 5,597,289 01-28-1997 4,410,299 10-18-1983 Shimoyama SIC FOREIGN PATENT DOCUMENTS **TRANSLATION DOCUMENT** SUB-DATE YES NO REF NUMBER COUNTRY **CLASS CLASS** (dd-mm-yy) 1 25-03-70 UK SK 1,185,314 1800446 11-12-69 DE YES YES 0665378 02-08-95 EP (5,501,582US)

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Sheet 4 of January 1980 Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. APPLICATION N (REV. 8-83) PATENT AND TRADEMARK OFFICE 23438.00023 09/649,190 INFORMATION DISCLOSURE APPLICANT **ITATION** Paul V. Cooper GROUP FILING DATE ets if necessary) August 28, 2000 1742 TITLE SCRAP MELTER AND IMPELLER THEREFORE **U. S. PATENT DOCUMENTS FILING** DATE IF **EXAMINER DOCUMENT** SUB-**CLASS CLASS APPROPRIATE** INITIAL **REF** NUMBER DATE **NAME** 4,556,419 12-03-1985 Otsuka et al. SK 03-03-1992 5,092,821 Gilbert et al. SK 04-20-1993 5,143,357 Cooper SK 5,203,681 04-20-1993 Cooper SY 5,558,505 08-24-1996 Mordue et al. SIC Gilbert et al. 5,586,863 12-24-1996 SIC OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Communication relating to the results of the Partial International search report for SK PCT/US97/22440 dated 13 May 1998. **EXAMINER** DATE CONSIDERED S. Kastler 1-02 *EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through

citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 (REV. 8-83) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. 23438.00023

APPLICATION NO 09/649,190

INFORMATION DISCLOSURE

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Use several sheet if necessary)

APPLICANT
Paul V. Cooper

FILING DATE August 28, 2000 GROUP 1742

TITLE: SCRAP MELTER AND IMPELLER THEREFORE

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CL	ASS		JB- ASS	FILING DATE IF APPROPRIATE
SK		2,865,618	12-23-58	Abell					
	•	2,901,677	08-25-59	Chessman et al					
		2,948,524	08-09-60	Sweeney et al					
		2,978,885	04-11-61	Davison					
		2,984,524	05-16-61	Franzen					
		2,987,885	06-13-61	Hodge					
		3,048,384	08-07-62	Sweeney et al					
1		3,070,393	12-25-62	Silverberg et					
		3,092,030	06-04-63	Wunder					
		3,227,547	01-04-66	Szekely					
		3,251,676	05-17-66	Johnson					
		3,255,702	06-14-66	Gehrm					
		3,272,619	09-13-66	Sweeney et al					
		3,289,473	12-06-66	Louda					
		3,291,473	12-13-66	Sweeney et al					
		3,400,923	09-10-68	Howie et al					
		3,459,346	08-05-69	Tinnes					
		3,487,805	01-06-70	Satterthwaite					
		3,512,762	05-19-70	Umbricht					
SK		3,618,917	11-09-71	Fredrikson	 				
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U.S. DEPARTMENT OF COMMERCE APPLICATION NO. Form PTO-1449 ATTY. DOCKET NO. PATENT AND TRADEMARK OFFICE (REV. 8-83) 09/649,190 23438.00023 INFORMATION DISCLOSURE APPLICANT Paul V. Cooper FILING DATE **GROUP** August 28, 2000 1742 TITLE: SCRAP MELTER AND IMPELLER THEREFORE **U. S. PATENT DOCUMENTS** FILING SUB-DATE IF **DOCUMENT EXAMINER APPROPRIATE** CLASS **CLASS INITIAL** REF **NUMBER** DATE NAME 3,650,730 03-21-72 Derham, et al Foulard, et al 3,689,048 09-05-72 02-06-73 Carbonnel 3,715,112 07-03-73 Foulard et al 3,743,500 07-03-73 Szekely 3,743,263 3,753,690 08-21-73 Emley et al Carter et al 3,759,635 09-18-73 3,767,382 10-23-73 Bruno, et al 01-15-74 Kraemer, et al 3,785,632 3,814,400 06-04-74 Seki 3,836,280 09-17-74 Koch 3,839,019 10-01-74 Bruno et al 3,871,872 03-18-75 Downing et al 3,873,305 03-25-75 Claxton et al Maas et al 3,886,992 06-03-75 3,915,694 10-28-75 Ando 05-04-76 Maas et al 3,954,134 3,961,778 06-08-76 Carbonnel et Chin et al 3,972,709 08-03-76 Claxton et al SK 3,984,234 10-05-76 DATE CONSIDERED **EXAMINER** S. KasHer 1-02

Form PTO-1449 (REV. 8-83)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. 23438.00023

APPLICATION N 09/649,190

INFORMATION DISCLOSURE

ELTATION necessary) **APPLICANT** Paul V. Cooper

FILING DATE August 28, 2000 GROUP 1742

TITLE: SCRAP MELTER AND IMPELLER THEREFORE

U. S. PATENT DOCUMENTS

XAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CL	ASS	1	UB- LASS	FILING DATE IF APPROPRIATE
SK		3,997,336	12-14-76	van Linden et al					
		4,003,560	01-18-77	Carbonnel					
		4,018,598	04-19-77	Markus					
		4,052,199	10-04-77	Mangal ick					
	******	4,128,415	12-05-78	van Linden et al					
		4,169,584	10-02-79	Mangalick					
		4,286,985	09-01-81	van Linden et al					
		4,322,245	03-30-82	Claxton					
		4,351,514	09-28-82	Koch					
		4,370,096	01-25-83	Church		·			
		4,372,541	02-08-83	Bocourt et al					
		4,392,888	07-12-83	Eckert et al					
		4,410,299	10-18-83	Shimoyama					
		4,456,424	06-26-84	Araoka					
		4,504,392	03-12-85	Groteke		•			
		4,537,624	08-27-85	Tenhover et al	П				
		4,537,625	08-27-85	Tenhover et al			-		
		4,556,419	12-03-85	Otsuka et al					
		4,557,766	12-10-85	Tenhover et al					
SK		4,598,899	07-08-86	Cooper					
EXAMINER			DATE CONSIDERED	•		 	•		

Form PTO-1449 (REV. 8-83)		EPARTMENT OF CO IT AND TRADEMAR	ATTY. DOCKET NO. 23438.00023	l l				APPLICATION NO. 09/649,190		
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			U. S. PATI	ENT DOCUMENTS						
EXAMINER DOCUMENT INITIAL REF NUMBER DATE			DATE	NAME	CI	LASS	SUB- CLASS		FILING DATE IF APPROPRIATE	
SK		4,609,442	09-02-86	Tenhover et al					· · · · · · · · · · · · · · · · · · ·	
		4,611,790	09-16-86	Otsuka et al						
		4,634,105	01-06-87	Withers et al						
		4,696,703	09-29-87	Henderson et al						
		4,701,226	10-20-87	Henderson et al						
		4,717,540	01-05-88	McRae et al						
		4,743,428	05-10-88	McRae et al						
	•	4,770,701	09-13-88	Henderson et al						
		4,786,230	11-22-88	Thut						
		4,802,656	02-07-89	Hudault et al						
		4,804,168	02-14-89	Otsuka et al						
	,	4,810,314	03-07-89	Henderson et al						
		4,842,227	06-27-89	_						
		4,844,425	07-04-89	Piras et al						
		3,575,525	04-20-71	Fox et al						
		4,360,314	11-23-82	Pennel1						
		4,640,666	02-03-87	Sodergard						
		5,209,641	05-11-93	Hoglund et al					-	
SIC		1,669,668	05-15-28	Marshall						
EXAMINER				DATE CONSIDERED						

APPLICATION NO. Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. PATENT AND TRADEMARK OFFICE (REV. 8-83) 09/649,190 23438.00023 INFORMATION DISCLOSURE O CONTESTION APPLICANT Paul V. Cooper GROUP FILING DATE essary) 1742 August 28, 2000 TITLE: SCRAP MELTER AND IMPELLER THEREFORE **U. S. PATENT DOCUMENTS** FILING DATE IF SUB-**DOCUMENT EXAMINER APPROPRIATE** INITIAL REF **NUMBER** DATE **NAME CLASS** CLASS 08-09-1960 2,948,524 Sweeney, et al 08-07-1962 Sweeney, et al 3,048,384 3,092,030 06-04-1963 Wunder 3,255,702 06-14-1966 Gehrm 3,291,473 12-13-1966 Sweeney, et al 3,715,112 02-06-1973 Carbonnel 3,767,382 10-23-1973 Bruno, et al 3,836,280 09-17-1974 Koch Carbonnel, et al 3,961,778 06-08-1976 10-05-1976 Claxton, et al 3,984,234 4,052,199 10-04-1977 Mangalick 4,169,584 10-02-1979 Mangalick Koch 4,351,514 09-28-1982 4,973,433 11-27-1990 Gilbert, et al 03-03-1992 Gilbert, et al 5,092,821 5,098,134 03-24-1992 Monckton Olson 07-21-1992 5,131,632 04-20-1993 5,203,681 Cooper 5,662,725 09-02-1997 Cooper DATE CONSIDERED **EXAMINER** S. Kastler 1-02

Form PTO-1449 (REV. 8-83)		EPARTMENT OF CON T AND TRADEMARK		ATTY. DOCKET N 23438.00023	ATION NO. 00				
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EXAMINER DOCUMENT INITIAL REF NUMBER DATE				NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE		
		5,634,770	06-03-97	Gilbert et al.	02.100	CLASS			
SK_		, í		<u></u>					
		5,662,725	09-02-97	Cooper					
		5,685,701	11-11-97	Chandler et al.					
		2,280,979	04-28-42	Rocke					
		3,010,402	11-28-61	King					
		3,459,133	08-05-69	Scheffler					
		3,512,788	05-19-70	Kilbane					
		3,776,660	12-04-73	Anderson et al.					
		3,824,042	07-16-74	Barnes et al.					
		3,985,000	10-12-76	Hartz					
		4,068,965	01-17-78	Lichti					
		4,091,970	05-30-78	Kimiyama et al.					
		4,126,360	11-21-78	Miller et al.					
		4,586,845	05-06-86	Morris					
		4,600,222	07-15-86	Appling					
		4,714,371	12-22-87	Cuse					
		4,834,573	05-30-89	Asano et al.					
		4,867,638	09-19-89	Handtmann et al.					
SK		5,399,074	03-21-95	Nose et al.					
EXAMINER				DATE CONSIDER	ED				
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Form PTO-1449 (REV. 8-83)		EPARTMENT OF CON IT AND TRADEMARK	ATTY. DOCKET NO. 23438.00023			APPLICATION NO. 09/649,190			
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EXAMINER INITIAL	EXAMINER DOCUMENT				CI	LASS	SUB- CLASS	FILING DATE IF APPROPRIATE	
OV		4,989,736	02-05-91	Andersson et al.					
SK_		5,145,322	09-08-92	Senior, Jr. et al.					
		5,165,858	11-24-92	Gilbert et al.					
		5,203,681	04-20-93	Cooper					
		5,268,020	12-07-93	Claxton					
	<u>. </u>	5,318,360	06-07-94	Langer et al.					
		5,388,633	02-14-95	Mercer, II et al.					
-		5,399,074	03-21-95	Nose et al.					
		5,407,294	04-18-95	Giannini					
		5,431,551	07-11-95	Aquino et al.					
		5,468,280	11-21-95	Areaux					
		5,484,265	01-16-96	Horvath et al.					
		5,495,746	03-05-96	Sigworth					
		5,509,791	04-23-96	Turner					
		5,558,501	09-24-96	Wang et al.					
		5,597,289	01-28-97	Thut					
		5,622,481	04-22-97	Thut					
		5,655,849	08-12-97	McEwen et al.					
SK		5,716,195	02-10-98	Thut					
EXAMINER				DATE CONSIDER	ED		-		
S. Kastler				1-02					

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. APPLICATION NO. (REV. 8-83) PATENT AND TRADEMARK OFFICE 23438.00023 09/649,190 INFORMATION DISCLOSURE APPLICANT Paul V. Cooper **FILING DATE GROUP** August 28, 2000 1742 TITLE: SCRAP MELTER AND IMPELLER THEREFORE **U. S. PATENT DOCUMENTS FILING** SUB-**DOCUMENT** DATE IF **EXAMINER NAME CLASS CLASS** APPROPRIATE **INITIAL REF NUMBER** DATE 04-07-98 Klien 5,735,668 5,735,935 04-07-98 Areaux Falk 5,772,324 06-30-98 07-28-98 Vild et al. 5,785,494 12-01-98 5,842,832 Thut 08-31-99 5,944,496 Cooper 5,947,705 09-07-99 Mordue et al. 5,993,726 11-30-99 Huang 5,993,728 11-30-99 Vild 6,036,745 03-14-00 Gilbert et al. Gilbert et al. 5,088,893 02-18-92 11-10-92 Shoji et al. 5,162,858 DATE CONSIDERED **EXAMINER** S. Kastler 1-02